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**FILED**

**JAN 19 2010**

**SECRETARY, BOARD OF  
OIL, GAS & MINING**

**BEFORE THE BOARD OF OIL, GAS, AND MINING  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF UTAH**

UTAH CHAPTER OF THE SIERRA CLUB,  
SOUTHERN UTAH WILDERNESS  
ALLIANCE, NATURAL RESOURCES  
DEFENSE COUNCIL, and NATIONAL  
PARKS CONSERVATION ASSOCIATION,

Petitioners,

v.

DIVISION OF OIL, GAS, & MINING,

Respondent,

ALTON COAL DEVELOPMENT, LLC, and  
KANE COUNTY, UTAH,

Respondent/Intervenors.

**MOTION FOR PARTIAL SUMMARY  
JUDGMENT—BASELINE  
HYDROLOGIC INFORMATION**

Docket No. 2009-019

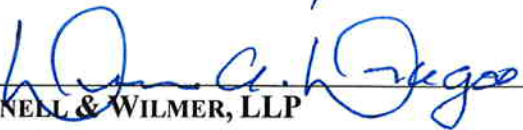
Cause No. C/025/0005

Alton Coal Development, LLC (“Alton”) by and through counsel and pursuant to Utah Administrative Code R641-105-300 and Utah Code § 63G-4-102(4)(b) submits this MOTION FOR PARTIAL SUMMARY JUDGMENT in the above-captioned formal adjudicative proceeding before the Utah Board of Oil, Gas & Mining (“the Board”). Specifically, Alton moves for summary judgment on the following claims of error in the Request for Agency Action filed on November 18, 2009 by the Sierra Club et al in this matter:

- A.1. Inaccurate or Incomplete Hydrologic Baseline Data;
- A.3. Inaccurate Determination of Probable Hydrologic Consequences;
- A.4. Incomplete Hydrologic Monitoring Plan;
- A.5. Inaccurate or Incomplete Hydrologic Operating Plan;
- B.3. Unsupported Determination That ACD’s Mine Has Been Designed to Prevent Material Damage to the Hydrologic Balance Outside the Permit Area; and
- C. Unlawful Waiver of Stream Buffer Zone Protection for Lower Robinson Creek.

Each of these claims of error relies upon the allegation that Alton did not collect sufficient baseline hydrologic information, and its permit application falls short of the legal standards set forth in this Board’s rules for approving coal mine permits. The Memorandum attached to this Motion sets forth the undisputed facts that baseline data were collected and recorded, and that these data meet the legal standards set forth by the Board. For this reason, Alton respectfully Moves for Summary Judgment denying all claims that the Division’s permit was based on inadequate baseline hydrologic data.

RESPECTFULLY SUBMITTED this 15<sup>th</sup> day of January, 2009.

  
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DIVISION OF OIL, GAS, & MINING,

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Respondent/Intervenors.

**MEMORANDUM IN SUPPORT OF  
MOTION FOR PARTIAL SUMMARY  
JUDGMENT—BASELINE  
HYDROLOGY**

Docket No. 2009-019

Cause No. C/025/0005

Alton Coal Development, LLC (“**Alton**”) by and through counsel and pursuant to Utah Administrative Code R641-105-300 and Utah Code § 63G-4-102(4)(b) submits this MEMORANDUM IN SUPPORT OF MOTION FOR PARTIAL SUMMARY JUDGMENT in the above-captioned formal adjudicative proceeding before the Utah Board of Oil, Gas & Mining (“the Board”).

### **INTRODUCTION**

Alton moves for summary judgment denying each of the claims in Petitioners’ Request for Review that is based on the false allegation that Alton failed to collect important baseline hydrologic data in support of its permit application and that the Division’s approval of the permit was consequently illegal. Whether the application was supported by adequate baseline hydrologic data can be determined from information readily available in the Division’s water quality database or the permit application, and no fact-finding hearing before the Board is needed. The following undisputed facts and legal arguments demonstrate that Alton submitted and the Division analyzed sufficient baseline data to meet the legal requirements of this Board’s rules.

### **STATEMENT OF UNDISPUTED MATERIAL FACTS**

The following Statement of Facts is supported by the information included within the (PAP) as submitted by Alton and as reviewed by the Division and Permit Application Package submitted in conjunction with this motion.

## GROUNDWATER BASELINE HYDROLOGIC INFORMATION

### Seeps and Springs

1. Twenty-seven spring or seep locations are included in Alton's baseline hydrologic data. (Permit Application Drawing 7-1.) (Ex. A).
2. Baseline location SP-3 is a spring in upland pediment alluvium in a side drainage tributary to Sink Valley Wash approximately 1.5 miles south (downstream) of the permit area. (Permit Application Table 7-5.) (Pages cited from the Permit Application Package ("PAP") are provided in Exhibit B. Chapter 7 of the PAP, covering hydrology, comprises 571 pages.)
3. Except for March and December 2008, when the site was inaccessible, SP-3 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters including flow, pH, total dissolved solids (TDS), total iron, and total manganese. Supplemental Declaration of Erik Petersen (January 13, 2010) (hereinafter "Petersen Decl.") (Ex. C).
4. Baseline location SP-4 is a spring with a discharge of about 1 gallon per minute (gpm) and displaying little seasonal variability in flow. It discharges from an apparent fault zone in the Dakota Formation along Sink Valley Wash about 1.1 miles south of the permit area. Permit Application page 7-4 (Ex. B).
5. SP-4 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters including flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

6. Baseline locations SP-6 is an area of diffuse seepage above an earthen impoundment in the wash immediately below the permit area. Permit Application page 7-58 (Ex. B).

7. Except for March 2006 and March 2008, when the site was inaccessible, SP-6 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

8. Baseline location SP-8 is a developed spring in Sink Valley just outside the southeast permit area boundary that provides culinary water for the Swapp Ranch house. Permit Application page 7-58. It is one of a cluster of springs from the same source identified in the PAP and monitoring plan as “alluvial groundwater area A.” Permit Application page 7-58 (Ex. B).

9. SP-8 has been measured in each calendar quarter since May 2005 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

10. Baseline location SP-14 is another spring located just inside the permit area at the southeast boundary about 0.1 mile from location SP-16 and discharging from the same source. It is one of a cluster of springs from the same source identified in the PAP and monitoring plan as “alluvial groundwater area A” and is considered redundant for monitoring purposes with SP-8. Permit Application pages 7-31, 7-58 (Ex. B).

11. Except for March and December 2008, when the site was inaccessible, SP-14 has been measured in each calendar quarter beginning in 2006 for field parameters that includes

flow, temperature, pH, and conductivity, and has been analyzed for a suite of laboratory parameters including total dissolved solids (TDS), total iron, and total manganese on four occasions. Petersen Decl. (Ex. C).

12. SP-16 is an alluvial spring in Sink Valley at the southeast permit area boundary. It is one of a cluster of springs from the same source identified in the PAP and monitoring plan as “alluvial groundwater area A.” Permit Application page 7-58 (Ex. B).

13. Except for March 2006 and March 2008, when the site was inaccessible, SP-16 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

14. Baseline location SP-33 is a developed alluvial spring that discharges into a pond at the Johnson Ranch about one-half mile south of the permit area and provides culinary water to two adjacent cabins. Permit Application page 7-58 (Ex. B).

15. SP-33 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

16. Baseline location SP-40 (Sorensen Spring) is an alluvial spring that is the current domestic water supply for the Sorensen Ranch, located in Sink Valley about 0.3 miles east of the permit area. There is currently no development at the spring that would convey water to the ranch house. Rather, water from the spring is obtained directly from the spring for use at the ranch. Permit Application page 7-62 (Ex. B).



17. SP-40 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

18. Of the cluster of springs comprising alluvial groundwater area A near the southeast permit area boundary, including the 17 monitoring locations SP-8, SP-14 through SP-26, SP-35, and SP-40, full baseline data have been collected at three locations (SP-8, SP-16, and SP-40) while field parameters including flow, temperature, pH, and conductivity have been measured during the baseline period at the remaining sites. Petersen Decl. (Ex. C).

19. Additional spring or seep locations in and around the permit area have been measured with lesser frequency, or for a smaller suite of parameters, since 2006. Petersen Decl. (Ex. C).

#### Wells

20. Baseline location Y-61 is an artesian well located at the Sorenson Ranch in Sink Valley about 0.3 miles east of the permit area. It is a 6.625-inch well constructed in 1980 as part of a previous permit application for groundwater pumping for alluvial aquifer testing. Permit Application page 7-30 (Ex. B).

21. Well Y-61 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters that includes pH, total dissolved solids (TDS), total iron, and total manganese. Artesian pressure measurements, expressed as feet of water column, are available from September 2007 through August 2008, and in March 2009. Petersen Decl. (Ex. C).

22. Baseline location Y-102 is a flowing alluvial well located in Sink Valley just inside the southeast boundary of the permit area. Permit Application Tables 7-1, 7-2 (Ex. B).

23. Well Y-102 has been measured in each calendar quarter beginning in May 2005 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Artesian pressure measurements, expressed as feet of water column, are available from March 2007 through March 2009. A supplemental observation in October 2007 measured only artesian pressure. Petersen Decl. (Ex. C).

24. Baseline location UR-70 is a non-producing monitoring well drilled in January 2007 in the alluvium inside the permit area near its north boundary. Permit Application Table 7-2 (Ex. B).

25. Except for March and December 2008, when the site was inaccessible, Well UR-70 has been measured in each calendar quarter beginning in June 2007 for a suite of field and laboratory parameters that includes depth to water, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

26. Depth-to-water measurements in additional wells in and around the permit area are available beginning in 2007 or earlier. Petersen Decl. (Ex. C).

#### Groundwater Hydrology

27. Alton's hydrology studies concluded that groundwater in the permit area is best characterized as an alluvial groundwater system above the Tropic Shale. Permit Application pages 7-4 to 7-5 (Ex. B).

28. Alton's hydrology studies concluded that the alluvial groundwater system is the only significant groundwater resource in the permit or adjacent areas likely to be affected by mining. Permit Application pages 7-2 through 7-6 (Ex. B).

29. Alton's hydrology studies concluded that recharge of the alluvial groundwater system in Sink Valley likely occurs via mountain-front-recharge along the flanks of the Paunsaugunt Plateau east and north of the permit area. Permit Application page 7-4 (Ex. B).

30. Alton's hydrology studies concluded that alluvial groundwater flow from east to west is blocked at a ridge of Tropic Shale running from north to south within the permit area, preventing significant alluvial groundwater in the permit area from reaching Lower Robinson Creek or the Kanab Creek drainage. Permit Application pages 7-6, 7-29 to 7-30; drawing 7-12 (Ex. B).

31. No significant source or flow of groundwater was observed in the Tropic Shale overlying the coal seam and below the alluvial groundwater system. Permit Application page 7-3 (Ex. B).

32. No significant source or flow of groundwater was observed in the Dakota Sandstone immediately below the coal seam. Permit Application page 7-4 (Ex. B).

#### Surface Water Hydrology

33. Surface waters in the northern portion of the proposed permit and adjacent area drain into the Lower Robinson Creek and upper Kanab Creek drainages. Permit Application page 7-9 (Ex. B).

34. Surface waters in the southern portion of the proposed permit and adjacent area drain into the Sink Valley Wash drainage which is tributary to Kanab Creek about 6 miles below the proposed Coal Hollow Mine permit area. Permit Application page 7-9 (Ex. B).

35. Lower Robinson Creek is ephemeral in the permit and adjacent areas upstream from the area of bank seepage near the west permit area boundary. Permit Application page 7-9 (Ex. B).

36. Sink Valley Wash is an ephemeral stream located east of and up-gradient from the proposed permit area. Permit Application page 7-9 (Ex. B).

#### SURFACE WATER BASELINE HYDROLOGIC DATA

37. Baseline location SW-1 is measured on Kanab Creek near the town of Alton. Flow is seasonally dependent and largely influenced by upstream water use, ranging from 10 cubic feet per second (cfs) or less during the springtime runoff period to 1 cfs or less during the summertime. The location is approximately 1.5 miles northwest of the permit area. Permit Application page 7-9 (Ex. B).

38. Except for December 2008, when the site was inaccessible, SW-1 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

39. Baseline location SW-2 is measured on Kanab Creek below its confluence with Lower Robinson Creek. The location is approximately one-half mile southwest of the permit area. Permit Application page 7-17 (Ex. B).

40. Except for periods when the site was inaccessible, SW-2 has been measured in each calendar quarter beginning in May 2005 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

41. Baseline location SW-3 is measured on Kanab Creek above its confluence with Lower Robinson Creek. The location is approximately one-half mile northwest of the permit area. Permit Application page 7-57 (Ex. B).

42. Except for December 2008, when the site was inaccessible, SW-3 has been measured in each calendar quarter beginning in 2006 for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. Petersen Decl. (Ex. C).

43. Baseline location SW-4 is located on Lower Robinson Creek approximately one-half mile northeast and upstream of the permit area. Permit Application page 7-9 (Ex. B).

44. Except for March and December 2008, when the site was inaccessible, SW-4 has been observed in each calendar quarter since March 2005. In that time, flowing water was found only once, in March 2005. On that occasion, the location was measured for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. When flowing water was not present, a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

45. Baseline location SW-101 is located on Lower Robinson Creek in the permit area at its northwest corner. Permit Application page 7-9 (Ex. B).

46. SW-101 has been observed in each calendar quarter since March 2005. On each occasion when flowing water was found, the location was measured for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. When flowing water was not present, a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

47. Baseline location SW-5 is located on Lower Robinson Creek about one-half mile west and downstream of the permit area. The small discharge occasionally present at SW-5 is derived from the seepage of alluvial groundwater into the Lower Robinson Creek stream channel between monitoring sites SW-101 and SW-5. Permit Application page 7-9 (Ex. B).

48. Except for three occasions when the site was inaccessible, SW-5 has been observed in each calendar quarter since May 2005. On each occasion when flowing water was found, the location was measured for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. When flowing water was not present, a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

49. Baseline location SW-6 is in the headwaters of a small tributary to Sink Valley Wash at the south boundary of the permit area. Permit Application pages 7-17, 7-57 (Ex. B).

50. SW-6 has been observed in each calendar quarter since September 2005. On each of three occasions when flowing water was found, the location was measured for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. When flowing water was not present, a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

51. Baseline location SW-7 is in an unnamed drainage tributary to Sink Valley Wash in Section 21, T39S, R5W about 0.75 miles east and upstream of the permit area. Permit Application 7-17 (Ex. B).

52. SW-7 was observed monthly from July 1987 through March 1988, and in each calendar quarter since September 2006, except for two occasions when the site was inaccessible. No flowing water was found in any of these observations, and a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

53. Baseline location RID-1 is located on an irrigation diversion from Lower Robinson Creek about one-half mile northeast and upstream of the permit area. Permit Application page 7-17 (Ex. B).

54. Except for three occasions when the site was inaccessible, RID-1 has been observed in each calendar quarter since 2006. On each occasion when flowing water was found, the location was measured for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. When flowing water was not present, a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

55. Baseline location SW-8 is located in Swapp Hollow about 1.5 miles east and upstream of the permit area. Permit Application page 7-17 (Ex. B).

56. Except for three occasions when the site was inaccessible, SW-8 has been observed in each calendar quarter since 2006. On each occasion when flowing water was found, the location was measured for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. When flowing water was not present, a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

57. Baseline location SW-9 is located on Sink Valley Wash approximately 1.5 miles south and downstream of the permit area. Permit Application page 7-17 (Ex. B).

58. SW-9 has been observed in each calendar quarter since June 2005. In that time, flowing water was found only twice, in March 2006 and March 2008. On those occasions, the location was measured for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. When flowing water was not present, a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

59. Baseline location SW-10 is on an unnamed tributary to Sink Valley Wash approximately 1.7 miles south of the permit area. Permit Application page 7-17 (Ex. B).

60. SW-10 has been observed in each calendar quarter since June 2005. In that time, flowing water was found only once, in March 2008. On that occasion, the location was measured for a suite of field and laboratory parameters that includes flow, pH, total dissolved solids (TDS), total iron, and total manganese. When flowing water was not present, a flow measurement of zero was recorded. Petersen Decl. (Ex. C).

#### State-Appropriated Water Rights

61. Each of the state-appropriated water sources that could be impacted by the proposed mine (17 out of a total of 33 in the permit and adjacent areas) is associated with at least one of the baseline locations identified above for which complete quarterly baseline information has been obtained. Permit Application Table 7-12 (Ex. B).

#### Findings by the Division

62. The Division reviewed the materials submitted by Alton in chapter 7 of the permit application and determined that the hydrologic resource information met the requirements of the



coal mining rules. Coal Regulatory Program, Coal Hollow Technical Analysis 76 (Oct. 15, 2009) (Ex. D).

63. With respect to baseline data collected by the applicant, the Division found that “although data are missing for some quarters at certain sites, the data are sufficient to determine seasonal variation in [water] quality and quantity.” Technical Analysis at 56, 59. (Ex. D).

64. In response to a public comment citing the Tech-004 Guidelines and expressing concern that baseline data were insufficient, the Division found that the applicant had met the standards set forth in its Tech-004. Technical Analysis at 59 (Ex.D).

65. The Division found that information provided by the applicant was sufficient to establish the hydrologic regime in the west side of the permit area adjacent to the Kanab Creek drainage. Technical Analysis at 61 (Ex.D).

66. The Division found that the neither the Tropic Shale Formation above the Smirl coal seam, nor the Dakota Formation below it, contained significant volumes of water. “Mining of the Smirl Coal, at the Tropic-Dakota interface, is not expected to intercept significant volumes of water from these strata no adversely impact any aquifer below the coal.” Technical Analysis at 61, 62 (Ex.D).

67. “The Division analyzed surface and groundwater data from the database and [Permit Application] to determine that sufficient monitoring information was available to assess the hydrologic regimes, establish seasonal variation, and the potential adverse impacts to the hydrologic balance.” Technical Analysis at 65 (Ex.D).

## ARGUMENT

In a formal adjudication under the Utah Administrative Procedures Act (“UAPA”), the presiding officer(s) may dispose of a matter by summary judgment as that standard is set forth in the Utah Rules of Civil Procedure. Utah Code § 63G-4-102(4)(b) (LexisNexis 2009); see Utah Admin. Code R641-100-500 (2009) (reserving all powers in UAPA to the Board). The standard is that summary judgment shall be rendered when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. Utah R. Civ. P. 56(c). A party opposing summary judgment may not rest on mere allegations or denials, but must provide affidavits or other evidence setting forth specific facts showing that there is a genuine issue to be resolved at trial. Id. at 56(e).

Under the standard of review adopted by the Board for its hearing, Sierra Club cannot prevail on its claim that the baseline hydrologic information is inadequate. The methods, protocols, and selection of sites for collection of baseline data are decisions requiring the skills of professional geologists/hydrologists who must exercise a substantial degree of technical judgment. The Division’s findings implementing this judgment are therefore entitled to a significant amount of deference upon review by the Board. Even if the Sierra Club were to produce expert testimony opining that obtaining more, or different, baseline monitoring information would be preferable, this technical disagreement cannot carry Petitioners’ burden to show error in the Division’s decision. Nor is it appropriate for the Board to substitute its judgment for that of the Division absent proof that the judgment was arbitrary and capricious or clearly erroneous. See Save Our Cumberland Mountains, Inc., No. NX-97-3-PR (Dep’t of the Interior Off. of Hearings & Appeals July 30, 1998). Significant technical issues such as the

selection of monitoring locations and protocols and the relative significance of data obtained, are matters requiring significant technical judgment and warranting deference to the Division. Id. Sierra Club cannot prevail on its claim of error, and Alton is entitled to summary judgment, because Petitioners cannot prove, in the face of Alton and the Division's extensive professional hydrological investigation, that the selection of monitoring locations and protocols underlying the baseline data collection was arbitrary and capricious.

Sierra Club offers fourteen allegations of error in the division's decision to grant the permit, apparently supported by its list of 32 alleged deficiencies in the permit application. Petitioner's Request for Agency Action and Request for a Hearing By Petitioners Utah Chapter of the Sierra Club et. al 15–35 (errors in decision); 10-14 (deficiencies in application) (Nov. 18, 2009) (hereinafter "Request for Review"). Of the fourteen alleged errors, six are based at least partly on Sierra Club's allegation regarding absence of baseline data. These six allegations of error, on which Alton is entitled to summary judgment as explained below, are:

- A.1. Inaccurate or Incomplete Hydrologic Baseline Data;
- A.3. Inaccurate Determination of Probable Hydrologic Consequences;
- A.4. Incomplete Hydrologic Monitoring Plan;
- A.5. Inaccurate or Incomplete Hydrologic Operating Plan;
- B.3. Unsupported Determination That ACD's Mine Has Been Designed to Prevent Material Damage to the Hydrologic Balance Outside the Permit Area; and
- C. Unlawful Waiver of Stream Buffer Zone Protection for Lower Robinson Creek.

The following sections explain, first, that because the allegedly missing data are in fact available, and meet the regulatory requirements for baseline hydrologic information, summary

judgment is appropriate on each of these six claimed errors.<sup>1</sup> Second, each of the deficiencies claimed by Sierra Club in support of its allegation of error is based on an incomplete and piecemeal approach to the area's hydrology that is far inferior to Alton's careful and thorough hydrologic investigation set forth in the PAP and the Division's analysis finding that this data meets the requirements of the Utah Coal Program.

**I. ALTON PROVIDED ADEQUATE BASELINE INFORMATION ON BOTH SURFACE AND GROUNDWATER RESOURCES IN THE PERMIT AND ADJACENT AREAS**

This Board's rules governing the contents of permit applications require pre-mining information on both water quality and quantity, for both surface and groundwater resources. Utah Admin. Code R645-301-724 (2009). The extent of area to be covered by this information is the permit area and adjacent area. R645-301-724.100, 724.200.<sup>1</sup> For groundwater resources, baseline data must be collected for water in the coal seam, above it, and in each potentially-impacted stratum below. R645-301-724.100. The minimum standard for describing water quality is the same for surface and underground water, requiring descriptions of four parameters: (1) total dissolved solids or specific conductance corrected to 25 degrees C, (2) pH, (3) total iron, and (4) total manganese. Id. For groundwater quantity, the minimum standard requires (1) approximate rates of discharge or usage, and (2) "depth to the water in the coal seam and each water-bearing stratum above and potentially-impacted stratum below the coal seam." R645-301-724.100. For surface water quantity the applicant must supply "baseline information on seasonal

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<sup>1</sup> "Permit area" is defined as the area covered by the operator's reclamation bond, roughly coinciding with surface disturbance. R645-100-200. "Adjacent area" is a context-based definition that encompasses area contiguous to and beyond the permit area where the resource at issue "reasonably could be expected to be adversely affected" by the proposed operations. Id.

flow rates.” R645-301-724.200. The Division is authorized to require additional information in any of these categories. R645-301-724.

Summary judgment on this issue is appropriate because the contents of the permit application package (“PAP”) and the Division’s Coal Mining Water Quality Database are not in dispute, and whether information is present or absent in these sources can be determined without the need for hearing. The material facts are therefore not in dispute. Determination of whether the information present in the PAP is sufficient under the minimum standards identified above is a legal determination amenable to summary decision.

**A. The Permit Application Package and Water Quality Database Present an Adequate and Complete Set of Surface Water Baseline Data**

As mentioned above, the legal standard for surface-water baseline data set forth in this Board’s rules require an applicant to provide five measurements (flow, pH, TDS, total Fe, and total Mn) that are “sufficient to demonstrate seasonal variation and water usage.” R645-301-724.200. The Division has recommended that a minimum of two years of quarterly baseline data should be collected for each source to demonstrate seasonal differences, if any. Div’n of Oil, Gas & Mining, Water Monitoring Programs for Coal Mines Tech-004 at 10 (June 27, 2006) (hereinafter “Tech-004”) (Ex. E).<sup>2</sup> Neither the Rules nor the Tech-004 Guidelines recommend any specific number or spacing of sample points on a single surface or groundwater source. The Division’s Guidelines are intended to be “advice” to applicants and operators. They have not been promulgated as rules and therefore lack the force of law. Tech-004 at 1. The Tech-004 Guidelines advise one year of baseline data when the application is filed, adequate to describe

seasonal variation. The Division unequivocally found that Alton's Permit Application met this recommended standard. Technical Analysis at 59, 76 (Ex.D).

As set forth in the Statement of Undisputed Facts, above, the Permit Application Package identifies eleven locations in the permit and adjacent area where surface-water baseline data were collected. In each case, data collection began before the third quarter of 2007, providing more than two years of data by the time the permit was granted in October of 2009. At each location, the required five parameters were measured by laboratory or field methods on each occasion when a measurement was possible. In many cases with the surface water sources, no flow was observed and consequently no sample could be analyzed for pH, TDS, total iron, or total manganese. The database records these observations with a zero flow measurement.

With respect to surface water, Sierra Club's alleged error is premised on its undisclosed assumption that a seasonal observation recording zero flow cannot meet the requirements of the Board's rules. Based on this assumption, it concludes that every observation of a dry stream is tantamount to a missing data point. This position lacks either technical or legal merit. Stripped of this unsupported assumption, Sierra Club's Petition for Review discloses nothing more than Sierra Club's disagreement with the judgment of the Division's and Alton's technical experts regarding monitoring locations and protocols. This disagreement does not show that the Division's decision to grant the permit based on this baseline information was arbitrary and capricious, Sierra Club cannot prevail on its claim that the permit approval was based on inadequate baseline hydrological information in the PAP merely because it desires additional

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<sup>2</sup> The Tech-004 Guidelines contain more specific guidelines for perennial and intermittent streams, but not for ephemeral streams. Tech-004 at 13.

analysis. The standard is not the number of monitoring locations and sampling sites. The correct standard is whether the data submitted was sufficient to allow the Division to make an informed decision. Therefore, that part of its petition should be denied.

**B. The Permit Application Package and Water Quality Database Present an Adequate and Complete Set of Groundwater Baseline Information**

The legal standard for groundwater baseline data set forth in this Board's rules require an applicant to provide six measurements (approximate rates of discharge, depth to water, pH, TDS, total iron, and total manganese) that are "sufficient to demonstrate seasonal variation and water usage." R645-301-724.100. The recommended duration of baseline data collection is the same as for surface water, and the Guidelines again offer no suggestion on extent or density of sampling beyond stating that "each source" should be measured.

As set forth in the Statement of Undisputed Facts, above, the Permit Application Package identifies eight locations in the permit and adjacent area where baseline data were collected from seeps or springs, three wells where water quality and quality data were collected, and 32 wells where depth-to-water was recorded. In each case, data collection began on or before the third quarter of 2007, providing more than two years of data by the time the permit was granted.

Each of Sierra Club's allegations related to baseline hydrologic information for groundwater are likewise rooted in its simple disagreement with Alton's and the Division's technical judgments. Sierra Club's allegation of error related to the alluvial groundwater seeps on Lower Robinson Creek is an example of this type of disagreement. Under most circumstances, these seeps provide the entire flow in the creek at that location, but vary in size and location over time. The creek is ephemeral and dry immediately upstream of the seeps, so

that the entire flow of the creek downstream, at point SW-5, is attributable to the seep. Therefore, data related to the seeps is captured at point SW-5. This rationale, based on the judgment of Alton's hydrologist, is set forth in the permit application. (PAP page 7-6.) The Division has specifically found, after a thorough review by technical experts, that Alton's hydrologic resource information meets the Utah Coal program's requirements. Technical Analysis at 76–77. Petitioners cannot show that capturing data related to the seeps in this manner is inadequate to describe the hydrologic system at that location, or to measure seasonal variations in water quality and quantity. Sierra Club cannot prevail on its claim that the baseline hydrology is inadequate and that the Division's findings are arbitrary and capricious.

At most, Sierra Club has merely expressed its disagreement with Alton's and the Division's technical approach to obtaining baseline data, which is insufficient to carry its burden in this matter. The Petitioners may not substitute their judgment for that of the Division and their allegations should be dismissed.

## **II. NONE OF SIERRA CLUB'S ALLEGED DEFICIENCIES IN BASELINE DATA COLLECTION ACTUALLY SHOWS A FAILURE TO ACCURATELY CHARACTERIZE HYDROLOGIC RESOURCES IN THE PERMIT AND ADJACENT AREAS**

The fundamental error in Sierra Club's approach lies in its decision to evaluate and attack the hydrologic baseline information in piecemeal fashion. In contrast, Alton's and the Division's hydrologists have analyzed and quantified the surface and groundwater *systems* present in the permit and adjacent areas, and have made judgments about the importance of individual measurements at discrete locations based on understanding the interactions of individual features and locations in the overall system. Sierra Club's attack on the baseline data is fatally flawed by



its choice to ignore the overall hydrologic system and attack individual monitoring decisions outside the broader context within which Alton and the Division have determined the hydrologic consequences of mining at Coal Hollow.

Sierra Club's claims of legal error related to hydrologic baseline information appear to be based, in turn, on its list of alleged deficiencies in the permit application. These purported deficiencies are without basis in either law or fact. The following summarizes each alleged deficiency relating to baseline hydrology as it was numbered in Sierra Club's Request on pages 10-12, and explains the facts and reasons confirming that each claim is without merit and should be dismissed.

1. Lack of Surface Water Baseline Data in Sink Valley Wash Further Than 1.5 Miles Below the Permit Area.

No such data are required, because the locations are beyond the area where effects from the Mine are likely. Baseline information is required for the permit and adjacent areas, R645-301-724, where the adjacent area is defined as the area beyond the permit area where a resource is likely to be affected by mining. R645-100-200. Sierra Club has identified no plausible mechanism for the more distant downstream reach of Sink Valley Wash it proposes for baseline monitoring to be affected by mining in a way that would not be measured at the existing monitoring point. Alton and Division hydrologists determined that there is no realistic potential for either groundwater or surface water from the mine to affect the lower reaches of Sink Valley Wash. Alluvial groundwater from Sink Valley does not appear in the lower Sink Valley Wash channel. Permit Application page 7-5 (Ex. B). There is no flow in the wash under normal conditions, and no established channel for the wash near the permit area, where it is up-gradient

from the proposed mine. Permit Application page 7-5 (Ex. B), Technical Analysis at 35, 75 (Ex. D). Without a realistic possibility that water from the mine area would reach a location, that location cannot be said to lie within the adjacent area for water resources, and neither baseline nor operation monitoring is required. Even if water might reach that point, it would have to pass the upstream location to do so, and there is no requirement for redundant monitoring locations. Petitioners' allegations are without merit and should be dismissed.

2. Lack of Surface Water Baseline Data on Kanab Creek Below Monitoring Location S-2.

No such data are required, because the locations are beyond the area where effects from the Mine are likely. Sierra Club has identified no plausible mechanism for the more distant downstream reach of Kanab Creek to be affected by mining in a way that would not be measured at the existing monitoring point. Hydrologists determined that alluvial groundwater from the east of the permit area doesn't reach the Kanab Creek drainage located to the west, and no other aquifer exists in that area. Technical Analysis at 36, 61, 66 (Ex. D). No surface water from near the mine area reaches Kanab Creek via Lower Robinson Creek. Permit Application p. 7-9 (Ex. B). Again, because any water in this location is unlikely to be affected by mining, additional baseline monitoring is unnecessary and redundant. Petitioners' allegation is without merit and should be dismissed.

3. Many Surface Baseline Sites Don't Have Non-Aero Data for at Least One Season or for the Full Two-Year Period Required by Guidelines.

Sierra Club complains, in essence, that the record fails to record the flow rate and chemical composition of water that was not present. This objection was addressed and rejected by Division. Technical Analysis at 56, 59 (Ex. D). Recording a zero or no-flow measurement

when a stream does not contain flowing water is an appropriate method for recording information about surface water quantity and quality. Petersen Decl. I ¶¶ 16-18 (Dec. 8, 2009) (This initial Declaration of hydrologist Erik Petersen was filed with Alton's Response to the Request for Review on the date indicated, and is provided again without the accompanying data tables as Exhibit F). Petitioners' allegation is without merit and should be dismissed.

4. Only one data point is recorded at SW-4 located upstream of the proposed mine on Lower Robinson Creek.

The allegation is misleading. This monitoring location has been observed on 23 occasions since 1987, during which flowing water was found only once, in May of 2005. Petersen Decl. (Ex. C). Monitoring of the location has been consistent since 2005. Id. Petitioner's allegation is without merit and should be dismissed.

5. Only three complete data entries are presented for SW-6 draining a significant portion of the mine disturbance.

The allegation is misleading. This monitoring location has been observed on 21 occasions since 1987, during which flowing water was found and analyzed on four occasions. Petersen Decl. (Ex. C). On one of those locations, field measurements were taken, but no laboratory analyses were obtained. Id. Monitoring of the location has been consistent since 2005. Id. Sierra Club's assumption that the location at SW-6 would drain "a significant portion of the mine disturbance" is unsupported and incorrect. Petitioners' allegations is without merit and should be dismissed.

6. Only one downstream surface baseline site exists on Sink Valley Wash at SW-9.

See Alton's response to the same allegation in paragraph 1, above. This allegation should be dismissed.

- 7a. The Permit Application Does Not Specify the Location of the Discharge Covered by the Mine's UPDES Permit.

The Board's rules do not include any requirement to specify the location of possible UPDES discharges in the application materials. No mine discharges are expected. Permit Application page 7-16 (Ex. B). Petitioners' allegation is without merit and should be dismissed.

- 7b. No Baseline Geomorphology is Presented for Sink Valley & Lower Robinson Creek Channels Affected by Proposed Discharge.

This allegation is false. The geomorphology of the Sink Valley Wash and Lower Robinson Creek channels are discussed in Alton's Permit Application and the Division's Technical Analysis. Permit Application pages 7-42 through 7-45 (Ex. B); Technical Analysis at 72 (Ex. D). Petitioners' allegation is without merit and should be dismissed.

8. No baseline Groundwater Data for Sink Valley Wash Were Obtained at Any Point More 1.5 Miles Downstream From the Permit Area.

No such data are required under the Utah Coal Program, because the locations are beyond the area where effects from the Mine are likely. Sierra Club has identified no plausible mechanism for the more distant downstream reach of Sink Valley Wash to be affected by mining in a way that would not be measured at the existing monitoring point. The hydrologists determined that groundwater from the recharge area up-gradient from the permit area did not reach the lower portion of Sink Valley Wash. Permit Application page 7-5 (Ex. B). Petitioners' allegation is without merit and should be dismissed.

9. No baseline groundwater data are provided for the alluvial bank seepage in Lower Robinson Creek.

The allegation is false. The quality and quantity of water seeping from the bank in Lower Robinson Creek is captured at sample location SW-5. Permit Application page 7-6 (Ex. B). The

allegation reflects a difference of opinion over sampling methodology. It cannot be arbitrary and capricious to sample at a discrete in-stream location rather than a diffuse stream bank when the entire stream flow originates in the diffuse bank seepage. Petitioners' allegation is without merit and should be dismissed.

10. No baseline groundwater data are presented in the Kanab Creek drainage.

No such data are required under the Utah Coal Program, because the location is beyond the area where effects from the Mine are likely. Groundwater from the mine area does not reach the Kanab Creek drainage. Permit Application at 7-6 (Ex. B); Technical Analysis at 66 (Ex. D). Sierra Club has identified no plausible mechanism for groundwater in the Kanab Creek drainage to be affected by mining. Petitioners' allegation is without merit and should be dismissed.

11. No Baseline Groundwater Data is Provided for the Dakota Formation Found Immediately Below the Coal Seam.

No such data are required because the Dakota Formation contains no significant groundwater resources. Permit Application pages 7-3 to 7-4 (Ex. B). This issue was addressed and rejected by the Division in response to public comments. Technical Analysis at 62 (Ex. D). Petitioner's allegation is without merit and should be dismissed.

12. No Baseline Data on Water Quantity are Available for 23 of 33 Water Rights Potentially Affected.

The Sierra Club misstates the number of affected water rights, which is 17, not 33. Permit Application Table 7-12 (Ex. B). Each affected right is covered by one or more existing baseline data locations. Id. The Division analyzed the need for, and likely success of, replacement of appropriated water sources in light of this information and determined that existing water rights

were adequately protected. Technical Analysis at 73-74 (Ex. D). Petitioners' allegation is without merit and should be dismissed.

13. No Baseline Data on Water Quality for 25 of 33 Water Rights Potentially Affected.

See Alton's response to alleged deficiency number 12, above. Petitioners' allegation is without merit and should be dismissed.

14. No Baseline Data on Seasonal Quantity are Available at 38 of 54 Operational Monitoring Sites.

The protocol for operational monitoring does not require corresponding baseline data for each site. See Permit Application pages 7-54 through 7-59 and Tables 7-4 through 7-7 (Ex. B). The Monitoring Plan calls for 19 newly-constructed monitoring wells, for which pre-mining data will obviously not be available. Permit Application pages 7-58 through 7-59 (Ex. B). There is no legal or practical requirement limiting monitoring locations to the number of baseline locations. Selection of monitoring locations and protocol is a matter of significant technical judgment warranting deference by the Board to the Division's conclusions. Petitioner's allegation is without merit and should be dismissed.

15. No Baseline Data are Presented on Seasonal Quality at 45 of 54 Operational Monitoring Sites.

See Alton's Response to Alleged Deficiency number 14, above. Petitioners' allegation is without merit and should be dismissed.

16. No Baseline Data are Presented on Seasonal Quality at 36 of 44 Springs, Wells, and Alluvial Trenches.

Eighteen of the springs in the area are clustered in the same groundwater discharge area within a few yards of each other, and full sampling at each is redundant. Permit Application

Dwg 7-1 (Ex. A). Many wells are piezometer wells not constructed or designed for sampling. Petersen Decl. (Ex. C). There is no practical or legal requirement for separate baseline measurements from multiple expressions of the same groundwater source, or for collection of seasonal data at alluvial trenches. Alton objects to Sierra Club's implicit assumption that if any data related to baseline conditions are collected from any site, all data required by the rules must be collected from that site.

In sum, the Division has correctly found on the basis of detailed technical analysis that the Hydrologic Resource Information provided in the Permit Application meets the requirements of the Coal Mining Rules. (TA at 76.) Each of the Petitioners' purported deficiencies in the Permit Application is based upon non-existent legal requirements, unsupported assumptions regarding the area's hydrology, or simple misstatement of the facts. None of these allegations demonstrates that the Division erred in granting the Permit Application for the Coal Hollow Mine, and summary judgment disposing of the legal claims resting on these purported deficiencies is appropriate.

## **CONCLUSION**

To support its Application covering a permit area of roughly one square mile, Alton submitted a massive collection of data: full baseline data, as required by the rules, at seven springs or seeps, three wells, and twelve surface locations. Supplementary data were provided at dozens more locations. The Division has entered its findings specifically confirming that Alton's hydrologic resource information meets the requirements of the Coal Program. Even though the question of adequate baseline hydrologic data forms the core of the Sierra Club's objections to the permit, it is appropriate for summary judgment. The necessary facts are apparent and

undisputed, and the Board can determine from those facts whether the legal standards for baseline hydrologic information are satisfied. The decision-making process is simple: either the required baseline data are present, or they are not. These facts can be determined without dispute by turning to the Permit Application and the Division's water quality database; and whether data present in those sources is adequate can be determined by applying legal standards set forth in the Board's rules. The undisputed facts set forth herein show that data meeting the requirements of the Rules are present for both surface and groundwater in the permit and adjacent areas. Sierra Club's apparent, but unstated, objections to the selection of sampling points and methods of recording data are insufficient to demonstrate error by the Division in granting the permit. The claims of error should be rejected and partial summary judgment for Alton and the Division should be entered on claims that the permit application contained inadequate baseline hydrologic data.

RESPECTFULLY SUBMITTED this 15<sup>th</sup> day of January, 2010.



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**CERTIFICATE OF SERVICE**

I hereby certify that on the 5 day of January, 2010, I mailed a true and correct copy of the foregoing MOTION FOR PARTIAL SUMMARY JUDGMENT, with the accompanying MEMORANDUM IN SUPPORT OF MOTION FOR PARTIAL SUMMARY JUDGMENT via e-mail and United States mail, postage prepaid, to the following:

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